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Appl. No. 10/734,366  
Amdt. dated December 13, 2006  
Reply to Office Action of June 13, 2006

PATENT

### REMARKS/ARGUMENTS

#### The Invention

The invention relates to relational databases, database use, graphical presentation of data, genomics, and gene discovery.

#### Status of the Claims

Claims 1-28 are pending in this application.

Claims 1-8, 16-17, and 24 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by Imachi *et al.* (U.S. Patent 7,047,255).

Claims 9-15, 18-23, and 25-28 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Imachi *et al.* (*supra*) in view of Karchi *et al.* (U.S. Patent application publication 2004/0121360).

#### Amendments to the Claims

Claims 17 and 25 are cancelled.

Claims 1 and 9 are amended to recite "a multi-dimensional display comprising a circular figure". Support for the amendments is found *e.g.*, in paragraph 65 wherein it is recited: "The data clusters or contigs are plotted according to a standard x-y coordinate system which is disposed or projected within a usually circular figure...". No new matter is added.

Claim 5 is amended to recite: "said display comprising a circular figure". Support for the amendment is as for claims 1 and 9 above. No new matter is added.

Claim 16 is amended to recite "wherein the at least one searchable alphanumeric character corresponds to at least one contig". Support for the amendment is found *e.g.*, in original claim 17. Claim 16 is also amended to recite: "A plotting code segment that causes the computer to plot the input on a visual display comprising a circular figure...". Support for the amendment is as for claims 1, 5 and 9 above. No new matter is added.

Claims 18-20 are amended to recite their dependency on claim 16. No new matter is added.

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Claim 24 is amended to recite "contigs assembled from libraries containing EST data". Support for the amendment is found *e.g.*, in original claim 25. Claim 24 is also amended to recite: "Graphical display means, capable of displaying said data as a multi-dimensional display comprising a circular figure..." Support for the amendment is as for claims 1, 5, 9 and 16 above. No new matter is added.

Claims 18-20 are amended to recite their dependency on claim 25. No new matter is added.

Response to Rejections Under 35 U.S.C §102 (e)

Claims 1-8, 16-17, and 24 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by *Imachi et al.* (U.S. Patent 7,047,255 hereinafter *Imachi*).

The Examiner alleges that *Imachi* teaches a method of displaying data from a relational database comprising the same steps as claimed by the Applicants. Thus, the Examiner alleges that *Imachi* anticipates claims 1-8, 16-17, and 24.

Applicants respectfully traverse the rejection.

According to MPEP 2131, to anticipate a claim, the reference must teach every element of the claim. Indeed, as cited in MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference *Verdegall Bros. v. Union Oil Co. of California* 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the... claim" *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1990).

*Imachi* discloses that: "The present invention enables the instant obtainment of a general view on the characteristics of the entire document group by displaying the characteristics of the document group in a *two-dimensional coordinate system*" (column 2, lines 8-11, emphasis added).

*Imachi* is *completely silent* with respect to disclosure of "a *multidimensional display comprising a figure* having loci distributed about the periphery thereof" and "plotting a symbol for each cluster within the *multidimensional* figure based on a set of coordinates within

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said *multi-dimensional display*", as claimed by the Applicants. Thus, *Imachi* fails to disclose each and every element of the claims.

Furthermore, claim 16 recites that: "at least one searchable alphanumeric character corresponds to at least one contig". Claim 24 recites: "plotting contigs assembled from libraries containing EST data". *Imachi* is also *completely silent* with respect to disclosure of "contigs" and "EST data". This is not surprising since *Imachi* discloses methods for analyzing the content of documents for words.

Because *Imachi* fails to disclose each and every element of the claims, either expressly or inherently, the reference is not a proper basis for rejection under 35 U.S.C. §102. Thus, the rejection of claims 1-8, 16-17, and 24 under 35 U.S.C. §102(e) is improper. Therefore, Applicants respectfully request that the rejection be withdrawn.

#### Response to Rejections Under 35 U.S.C §103 (a)

Claims 9-15, 18-23, and 25-28 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over *Imachi* in view of *Karchi et al.* (U.S. Patent application publication 2004/0121360 hereinafter *Karchi*).

The Examiner characterizes the *Imachi* reference as teaching the limitations of claims 1-8, 16-17, and 25 [sic] as discussed above under the rejection under 35 U.S.C. §102(e). However, as presented above, the *Imachi* reference is completely silent with respect to disclosure of "a multidimensional display comprising a circular figure having loci distributed about the periphery thereof", as recited in claim 1. Furthermore, the *Imachi* reference is also silent with respect to disclosure of "contigs" and "EST data".

The Examiner characterizes the combination of *Imachi* with *Karchi* as teaching a method of identifying contigs by comparing ESTs and plotting contig data on a multi-dimensional display. The Examiner argues that a skilled artisan would have been motivated to modify the teachings of *Imachi* by combining it with the invention disclosed by *Karchi* because, according to the Examiner, the results of this combination would lead to an overall visual representation of data [that] may be presented by plotting data which have been gathered and clustered by common attributes.

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Applicants respectfully traverse the rejection.

***A Proper Prima Facie Case of Obviousness Has Not Been Set Forth***

To construct a *prima facie* case of obviousness, the Examiner must meet three criteria. First, there must be some suggestion or motivation whether in the references themselves or in the knowledge generally available to those of skill in the art, to modify the reference or combine the reference teachings. Second, there must be a reasonable expectation of success. Third the prior art reference(s) must teach or suggest all of the claim limitations. *See* MPEP §2142.

***(1) There is no suggestion or motivation to modify the reference teachings***

*Imachi* teaches a method for analyzing documents by extracting two document units from a document database and relevance degrees between individual elements of a group of the document units are calculated. The results are displayed on a *two-dimensional* coordinate plane depending on the relevance degree (*see e.g.*, Abstract).

*Karchi* teaches a method of generating genotypic and possibly phenotypic variation in an organism is provided. The method is effected by (a) isolating at least one non-coding nucleic acid sequence from a genome of the organism; and (b) genetically transforming the organism with the at least one non-coding nucleic acid sequence to thereby generate genotypic and possibly phenotypic variation in the organism (*see e.g.*, Abstract).

A person of skill in the art would not be motivated to combine the references since the references are non-analogous art. Indeed, According to MPEP 2141.01(a): "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986).

Not only are the cited references outside the field of Applicant's endeavor, they are non-analogous art with respect to each other and therefore cannot be combined.

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*(2) The cited reference does not provide a reasonable expectation of success*

As noted above, the cited references are outside the field of Applicant's endeavor, they are non-analogous art with respect to each other. Thus, the combination of references does not provide a reasonable expectation of success.

*(3) The reference fails to teach all of the claimed elements*

According to MPEP 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Furthermore, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

As discussed above, *Imachi* discloses methods for analyzing the content of documents for words. The *Imachi* reference is completely silent with respect to disclosure of "a multidimensional display comprising a circular figure having loci distributed about the periphery thereof", as recited in claim 9. Furthermore, the *Imachi* reference is also silent with respect to disclosure of "contigs" and "EST data".

The *Karchi* reference is also completely silent with respect to disclosure of "a multidimensional display comprising a circular figure ...", as recited in claims 5, 9, 16 and 24.

Therefore, the combination of references fails to disclose all of the claimed elements.

*Conclusion*

In summary, one of skill in the art would not be motivated to combine the references because the references are non-analogous art. Furthermore, because the references are non-analogous art, there is not a reasonable expectation of success. Finally, the combination of references does not recite each and every element of the Applicant's claims. Thus, a proper *prima facie* case of obviousness has not been set forth. Therefore, the rejection is improper and should be withdrawn.

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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 510-559-6066.

Respectfully submitted,



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